

Fig. 7.

A PLAY button 703 shown in Fig. 7 is depressed to reproduce and display image data (image pickup data) serving as an actual reproduction target of the image file on a reproduction monitor 701.

The operator sequentially switches a plurality of files with file selection switches 704 and 705 while viewing the pickup image displayed on the reproduction monitor 701 and a white image 709 superposed on the pickup image. The operator then selects one image file obtained by picking up the image of a white sheet for white balance data.

When one image file is selected, a white sheet data reproduction unit 110 reproduces the white data on the monitor 701 on which the image serving as the reproduction target is being reproduced.

File selection is done as follows. While a file in which white data used as white balance data is written is being displayed on the monitor, a SELECT switch 708 is depressed to cause a white data image selection unit 109 to select a desired one of a plurality of files.

As indicated by the reproduction monitor 701 in Fig. 7, if the image pickup date and place are written in a location except a white data recording area 702 when intentionally picking up an image used for white balance data, operation for the white data can be

further facilitated.

Reproduction processing of an image in which white image data is stored will be described below.

In accordance with an image file selection signal
5 indicating that the file is selected, the white sheet
data image selection unit 109 extracts the white sheet
data of an image file being reproduced. A white
balance control value operating unit 111 calculates a
white balance control value on the basis of the white
10 data, as will be described below.

White balance calculations are done as follows.
The ratio of average values of R, G1, G2, and B is
calculated, and the reciprocal of the ratio of R and B
using the G1 and G2 average values as the median is
15 calculated as a white balance control value WBR, WBG1,
WBG2 and WBB, wherein $WBR = (G1+G2)/(2 \times R)$, $WBG1 =$
 $(G1+G2)/(2 \times G1)$, $WBG2 = (G1+G2)/(2 \times G2)$ and $WBB =$
 $(G1+G2)/(2 \times B)$.

A white balance control value setting unit 112
20 sets the resultant white balance control value as the
MWB control value in the image pickup apparatus.

When image pickup operation is performed using the
MWB control value set as described above, a white
balance adjustment unit 114 multiplies the set MWB
25 control value with each color component, input from an
image pickup data input terminal 113, of an image
signal output from the image pickup element and

converted into digital data, thereby adjusting the white balance.

The white balance-adjusted signal undergoes color processing in a color processing unit 115 and encoding processing in an encoding processing unit 116. An image filing unit 117 converts the encoded image signal into an image file together with the white sheet data extracted from the image pickup data. A medium-recording unit 118 records the image file on a recording medium.

As described above, there is provided a function of setting in the image pickup apparatus the MWB control value obtained from the white sheet data recorded together with the image pickup data in the image file. White data recorded in a plurality of scenes can easily be repeatedly used. Image pickup operation for setting an MWB control value upon a change in scene need not be done, thereby facilitating the use of MWB adjustment. Note that in this embodiment, it is described for descriptive simplicity that the image is reproduced on the monitor 701 in the image pickup apparatus, but an image file may be reproduced using, e.g., a personal computer.

As described above, according to the first embodiment, a plurality of white sheet data can be managed using one medium and accessed easily, thereby improving convenience in use of MWB white sheet data.